

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

ASETEK DANMARK A/S,

Plaintiff,

v.

COOLIT SYSTEMS INC, et al.,

Defendants.

Case No. [19-cv-00410-EMC](#)

**ORDER GRANTING IN PART AND
DENYING IN PART DEFENDANTS'
MOTION FOR SUMMARY
JUDGMENT; AND GRANTING IN
PART AND DENYING IN PART
PLAINTIFF'S MOTION FOR PARTIAL
SUMMARY JUDGMENT**

Docket Nos. 387, 394

I. INTRODUCTION

Plaintiff Asetek Danmark AS (“Asetek”) filed suit against CoolIT Systems, Inc. and its subsidiaries, and Corsair Gaming, Inc. and its U.S. subsidiaries (collectively “CoolIT”), asserting that CoolIT infringed and continues to infringe five of its patents — *i.e.*, the ‘601, ‘196, ‘362, ‘354 and ‘355 patents (collectively “CoolIT Patents”). CoolIT counterclaimed, alleging that Asetek infringed four of CoolIT’s patents — *i.e.*, the ‘330, ‘284, ‘266, and ‘567 patents. All of the allegedly infringed patents relate to liquid cooling systems and methods for cooling heat-generating electronic components. Both parties move for summary judgment. For the reasons stated below, the Court **GRANTS IN PART** Asetek’s Motion for summary judgment for validity of the ‘362 Patent and **DENIES IN PART** the Motion for noninfringement of the CoolIT Patents. The Court **DENIES IN PART** CoolIT’s Motion for summary judgment for validity of the CoolIT Patents and **GRANTS IN PART** the Motion for noninfringement of the ‘362 Patent.

A. Factual & Procedural Background

On January 23, 2019, Asetek filed this lawsuit against CoolIT. *See* Docket No. 1. Asetek’s patented combination of a pump, a dual-chambered reservoir, and a cold plate into a single pump unit allows improved efficiency and compactness that enables the pump unit to be installed directly on the CPU/GPU of a computer motherboard, graphics card, or a server, have decreased risk of coolant leakage, is easy to install and use, is simpler, and less costly. Docket No. 228 (SAC) at 4. CoolIT counterclaimed on April 11, 2019, alleging that Asetek’s Gen 4, Gen 5, Gen 6, and Gen 7 products infringe its own patents — *i.e.*, the ‘330, ‘284, ‘266, and ‘567 patents—which claim a fluid heat exchanger. *See* Docket No. 23; Docket No. 333 (Fourth Amended Counterclaim) at 14.

On December 22, 2020, this Court issued a minute order consolidating this case with the related case of *Asetek Danmark A/S v. Corsair Gaming, Inc. et al.*, Case No. 3:20-cv-06541-EMC, which asserted many of the same patents as this case. *See* Docket No. 207 at 1; SAC at 2-4. Therefore, the consolidated complaint (“SAC”) alleges infringement against CoolIT and Corsair, a provider of gaming and streaming products. *See* SAC.

The ‘354 and ‘355 patents were later found unpatentable by the Patent Trial and Appeal Board (“PTAB”), and Asetek appealed to the Federal Circuit. *See* Docket No. 380 (Order to Stay) at 3, n.2; Docket No. 465 (Joint Case Management Statement) at 5. There is a pending *inter partes* review (“IPR”) of the ‘601 and ‘196 patents. Joint Case Management Statement at 3. On September 30, 2021 and October 12, 2021, the ‘567 patent and some claims of the ‘266 Patents were found unpatentable by the PTAB and are subject to an appeal. *Id.* This Court granted a partial stay of litigation on February 10, 2022 as to Asetek’s ‘354, ‘355, ‘601, and ‘196 patents and CoolIT’s ‘567 patent, pending *inter partes* review of the ‘601 and ‘196 patents. *See* Order to Stay at 1. The stay did not affect the litigation as to Asetek’s ‘362 Patent and CoolIT’s ‘330, ‘284, and ‘266 Patents currently at issue as they are not presently subject to IPR. *See id.*

B. The ‘362 Patent

The ‘362 Patent claims an invention over prior art liquid cooling systems that were often bulky with many components which increased the total installation time, size, and risk of leakage.

Docket No. 1-1 (the ‘362 Patent) at 1:41-49. Asetek overcame this problem with a small and compact design that is more efficient, easy to use and implement, and requires a low level of maintenance. *Id.* at 1:53-52.

Only claims 17 and 19 are at issue in this case:

17. A method of operating a liquid cooling system for an electronic component positioned on a motherboard of a computer system, comprising:

separably thermally coupling a heat exchanging interface of a reservoir with the electronic component positioned at a first location on the motherboard, the **reservoir including an upper chamber and a lower chamber**, the upper chamber and the lower chamber being separate chambers that are vertically spaced apart and separated by at least a horizontal wall, the upper chamber and the lower chamber being fluidly coupled by one or more passageways, at least one of the one or more passageways being positioned on the horizontal wall, the heat exchanging interface being removably coupled to the reservoir such that an inside surface of the heat exchanging interface is exposed to the lower chamber of the reservoir;

positioning a heat radiator at a second location horizontally spaced apart from the first location, the heat radiator and the reservoir being fluidly coupled together by tubing that extends from the first location to the second location;

activating a pump to circulate a cooling liquid through the reservoir and the heat radiator, the pump including a motor and **an impeller having curved blades**, the impeller being positioned in the reservoir; and

activating a fan to direct air through the heat radiator, the fan being operated by a motor separate from the motor of the pump.

18. The method of claim 17, wherein activating the pump includes circulating the cooling liquid between the upper and the lower chambers of the reservoir.

19. The method of claim 18, wherein circulating the cooling liquid between the upper and the lower chambers includes passing the cooling liquid from the upper chamber to the lower chamber through a single passageway of the one or more passageways.

‘362 Patent, Claims 17-19.

Asetek’s claimed invention has several notable features, including “an impeller having a plurality of curved blades” and a single-receptacle “reservoir including an upper and a lower chamber” contained within it which circulates cooling liquid to keep computer chips from

overheating. *See id.* These limitations overcame prior art. Docket No. 387-3, Ex. 2 (U.S. Patent No. 7,971,632 file history) (adding “curved blades”); *see also Asetek Danmark A/S v. CMI USA Inc.*, 852 F.3d 1352, 1357–58 (Fed. Cir. 2017) (“[T]he jury found that the claimed liquid-cooling systems differ from the prior art . . . because the ‘reservoir’ is a ‘single receptacle that is divided into an upper chamber and a lower chamber.’”). The parties and this Court previously construed “chamber” as “compartment(s) within the reservoir” and “reservoir” as a “single receptacle defining a fluid flow path.” Docket No. 67 (Joint Claim Construction Statement) at 2-3; Docket No. 237 at 3, Docket No. 258 (Claim Construction Order) at 5. Furthermore, the parties stipulated to the following:

1. The claimed “reservoir” in Asetek’s invention is a single receptacle that is divided into an upper chamber and a lower chamber, with the upper chamber providing the pumping function and the lower chamber providing the thermal exchange function.
2. Prior art devices included a pump, a single-chamber reservoir (as that term was used in the prior art), and a cold plate as separate components that were connected using tubing or attached together with clips or screws or permanently coupled.
3. Asetek’s patent claims are directed to a liquid cooling device comprising a dual chambered reservoir bounded by a heat - exchanging interface.

Docket No. 342 (Estoppel Joint Statement) at 2.

1. The CMI Case

Asetek previously asserted the ‘362 Patent (and related U.S. Patent No. 8,245,764) in an unrelated action against Cooler Master (“CMI”). *See Asetek Danmark A/S v. CMI USA, Inc.*, Case No. 4:13-cv-00457-JST (hereinafter the “CMI case”). Represented by the same counsel as in the current case, Asetek argued that the patents were not invalid over the prior art because the ‘362 Patent’s “reservoir” limitation required a single receptacle while prior art Ryu disclosed two separate receptacles attached together. *See CMI USA Inc.*, 852 F.3d at 1357–58. The jury agreed with Asetek and found the ‘362 Patent valid over Ryu. *Asetek Danmark A/S v. CMI USA, Inc.*, No. 13-CV-00457-JST, 2015 WL 5568360, at *2 (N.D. Cal. Sept. 22, 2015), *aff’d in part, remanded in part*, 842 F.3d 1350 (Fed. Cir. 2016), *opinion modified and superseded on reh’g*, 852 F.3d 1352 (Fed. Cir. 2017), *and aff’d in part, vacated in part*, 852 F.3d 1352 (Fed. Cir. 2017).

The jury found the following key differences between the ‘362 Patent and the prior art:

Rather than connecting together multiple separate components (as in the prior art), Asetek’s patented pump head design combines, into a single unit, a pump and the claimed “reservoir” that has, among other things, dual chambers and is bounded by a removable cold plate. Also, the claimed “reservoir” in Asetek’s invention is a single receptacle that is divided into an upper chamber and a lower chamber, with the upper chamber providing the pumping function and the lower chamber providing the thermal exchange function.

Id. The Federal Circuit affirmed. *See CMI USA Inc.*, 852 F.3d at 1357–58.

Thereafter in a motion for contempt sanctions, Asetek argued that CMI’s product with two separate and separable receptacles infringed the ‘362 Patent, claiming that the single receptacle reservoir argument was not the “crucial distinction” from the prior art. *See Asetek Danmark A/S v. CoolIT Sys. Inc.*, No. 19-CV-00410-EMC, 2022 WL 74160, at *4 (N.D. Cal. Jan. 7, 2022). Upon this attempt to argue that a device with multiple separable receptacles can satisfy the single receptacle reservoir limitation in the CMI case, CoolIT sought leave to amend answers to add collateral and judicial estoppel defenses in the current action. *Id.* This Court granted the amendment and noted that “should Asetek now argue in the instant case that a reservoir encompasses multiple receptacles like it did at the July 27, 2021 *CMI USA Inc.* hearing, this argument would appear to be inconsistent with its previous argument in *CMI USA Inc.* that a reservoir limitation requires a single receptacle.” *Id.* at *9.

C. The ‘266, ‘330, and ‘284 Patents

Eleven claims across the ‘330, ‘284, and ‘266 Patents remain, each reciting or depending on an independent claim that recites a “plate” and a “plurality of [fins/walls]” defining a “corresponding plurality of microchannels”:

13. A fluid heat exchanger for cooling an electronic device, the heat exchanger comprising:

a plurality of walls defining a corresponding plurality of **microchannels**, wherein each microchannel extends from a first end to a second end;

a plate overlying the walls; and

a seal, wherein the seal is a portion of the plate;

a fluid inlet passage configured to deliver a heat-exchange fluid through one aperture in the plate to each microchannel at a position between the corresponding first end and the corresponding second end of the respective microchannel;

a fluid outlet passage configured to receive the heat-exchange fluid from the first end and the second end of each microchannel, wherein the fluid outlet passage has a first outlet region positioned adjacent the microchannel first ends and a second outlet region positioned adjacent the microchannel second ends, wherein the seal separates the fluid inlet passage from the fluid outlet passage;

wherein a flow of the heat-exchange fluid through the one aperture in the plate bifurcates into two sub flows within each microchannel, wherein the first outlet region receives one of the two sub flows adjacent the microchannel first ends and the second outlet region receives the other of the two sub flows adjacent the microchannel second ends, wherein the two sub flows recombine in the outlet passage.

15. The fluid heat exchanger according to claim 12, wherein the plurality of microchannels comprises at least two opposed outer microchannels and a centrally located microchannel positioned between the opposed outer microchannels, wherein the first outlet region comprises an outlet opening from each microchannel, wherein the outlet opening from the centrally located microchannel is larger than the outlet opening from at least one of the outer microchannels.

See, e.g., Docket No. 27-4 (the ‘266 Patent), claims 13, 15; Docket Nos. 27-1 (the ‘330 Patent); 27-2 (the ‘284 Patent).

On October 12, 2021, the PTAB issued a Final Written Decision (“FWD”) finding some of the asserted claims of CoolIT’s ‘266 Patent unpatentable and some of the asserted claims patentable. *See generally* Docket No. 394-5 (‘266 FWD). This decision came more than a month after close of fact discovery and after the parties exchanged initial expert reports on September 16, 2021. Representative claim 1, which was considered by the PTAB, read as follows:

1. A heat exchange system comprising:

a housing defining a recessed region and an outlet port fluidly coupled with the recessed region;

a heat sink having a plurality of juxtaposed fins defining a corresponding plurality of microchannels between adjacent fins;

a **manifold body** at least partially defining an opening overlying the microchannels,

wherein the **manifold body** defines a pair of compliant surfaces flanking the opening,

wherein the compliant surfaces urge against the fins,
defining a flow boundary of the microchannels,

wherein the opening extends transversely relative to the fins
and is configured to distribute a working fluid among the
microchannels,

wherein the **manifold body** partially occupies the recessed
region of the housing, leaving a pair of opposed portions of
the recessed region unfilled, defining opposed exhaust
manifold portions flanking the opening and being configured
to receive the working fluid from the microchannels, and

wherein the housing further defines an outlet plenum
configured to receive the working fluid from the exhaust
manifold portions and to convey the working fluid to the
outlet port.

‘266 Patent, claim 1. The PTAB found claims 1, 2, 4, 5, and 9 unpatentable and claims 13-15 not
unpatentable. ‘266 FWD at 47.

II. LEGAL STANDARD

A. Summary Judgment

Federal Rule of Civil Procedure 56 provides that a “court shall grant summary judgment
[to a moving party] if the movant shows that there is no genuine dispute as to any material fact and
the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). An issue of fact is
genuine only if there is sufficient evidence for a reasonable jury to find for the nonmoving party.
See Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248-49 (1986). “The mere existence of a
scintilla of evidence . . . will be insufficient; there must be evidence on which the jury could
reasonably find for the [nonmoving party].” *Id.* at 252. At the summary judgment stage, evidence
must be viewed in the light most favorable to the nonmoving party, and all justifiable inferences
are to be drawn in the nonmovant’s favor. *See id.* at 255.¹ Where a defendant moves for summary
judgment based on a claim for which the plaintiff bears the burden of proof, the defendant need
only point to the plaintiff’s failure “to make a showing sufficient to establish the existence of an

¹ Evidence may be presented in a form that is not admissible at trial so long as it could ultimately
be capable of being put in admissible form. *See* Fed. R. Civ. P. 56(c)(2) (“A party may object that
the material cited to support or dispute a fact cannot be presented in a form that would be
admissible in evidence”); *Fonseca v. Sysco Food Servs. of Ariz., Inc.*, 374 F.3d 840, 846 (9th Cir.
2004) (“Even the declarations that do contain hearsay are admissible for summary judgment
purposes because they ‘could be presented in an admissible form at trial’”).

1 element essential to [the plaintiff's] case.” *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986).
 2 “Summary judgment is appropriate in a patent case, as in other cases, when there is no genuine
 3 issue as to any material fact and the moving party is entitled to judgment as a matter of law.” *Nike*
 4 *Inc. v. Wolverine World Wide, Inc.*, 43 F.3d 644, 646 (Fed. Cir. 1994); Fed. R. Civ. P. 56(a).

5 B. Invalidity

6 A patent is presumed valid. 35 U.S.C. § 282. “The burden of establishing invalidity of a
 7 patent or any claim thereof rests on the party asserting such invalidity.” *Id.*; *Microsoft Corp. v. I4I*
 8 *Ltd. P’ship*, 564 U.S. 91, 102 (2011). Patents may be invalid as anticipated by prior art under 35
 9 U.S.C. § 102, invalid as obvious in light of prior art under 35 U.S.C. § 103, or invalid for lack of
 10 written description under 35 U.S.C. § 112, among other sections. For summary judgment of
 11 validity, the patentee must show that “the nonmoving party, who bears the burden of proof at trial,
 12 failed to produce clear and convincing evidence on an essential element of a defense upon which a
 13 reasonable jury could invalidate the patent.” *Eli Lilly and Co. v. Barr Labs., Inc.*, 251 F.3d 955,
 14 962 (Fed. Cir. 2001).

15 C. Noninfringement

16 “To establish infringement, every limitation set forth in a patent claim must be found in an
 17 accused product or process exactly or by a substantial equivalent” under the all-limitations rule.
 18 *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1535 (Fed. Cir. 1991) (citation omitted);
 19 *Freedman Seating Co. v. Am. Seating Co.*, 420 F.3d 1350, 1358 (Fed. Cir. 2005). Compliance
 20 with the all-limitations rule is “a question of law.” *Trading Techs. Int’l, Inc. v. eSpeed, Inc.*, 595
 21 F.3d 1340, 1355 (Fed. Cir. 2010). Therefore, summary judgment of noninfringement is
 22 appropriate where there is no genuine issue of material fact that the accused product does not
 23 include one or more limitations of the asserted patent claim either literally or under the doctrine of
 24 equivalents (“DOE”). *Nike*, 43 F.3d at 647; *Carnegie Mellon Univ. v. Hoffmann-LaRoche, Inc.*,
 25 55 F. Supp. 2d 1024, 1043-45, 1047-48 (N.D. Cal. 1999) (granting summary judgment of no
 26 infringement because the accused products did not include every limitation of the asserted claims
 27 literally or by an equivalent). “Whether an element of the accused device is equivalent to a claim
 28 limitation depends on ‘whether the substitute element matches the function, way, and result of the

claimed element or whether the substitute element plays a role substantially different from the claimed element.” *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1160 (Fed. Cir. 1998). “If a theory of equivalence would vitiate a claim limitation, [] then there can be no infringement under the doctrine of equivalents as a matter of law.” *Id.* That is, a doctrine of equivalents argument “fails if it renders a claim limitation inconsequential or ineffective.” *Akzo Nobel Coatings, Inc. v. DowChem. Co.*, 811 F.3d 1334, 1342 (Fed. Cir. 2016). If there is no vitiation of claim limitations, the issue of equivalency becomes a question of fact that depends on whether the patentee can “establish equivalency on a limitation-by-limitation basis by particularized testimony and linking argument as to the insubstantiality of the differences between the claimed invention and the accused device or process.” *Id.* Because the plaintiff bears the burden of demonstrating the existence of each limitation in the accused product, if there is a lack of evidence to show an accused product contains all of the limitations of the patent claims, the defendant is entitled to summary judgment. *Novartis Corp. v. Ben Venue Labs, Inc.*, 271 F.3d 1043, 1046 (Fed. Cir. 2001) (“Summary judgment must be granted against a party who has failed to introduce evidence sufficient to establish the existence of an essential element of that party’s case, on which the party will bear the burden of proof at trial.”); *accord Flexuspine, Inc. v. Globus Med., Inc.*, 879 F.3d 1369, 1377 (Fed. Cir. 2018).

III. DISCUSSION

A. Plaintiff’s Motion for Partial Summary Judgment

Asetek moves for partial summary judgment on two issues. First, Asetek argues that relevant claims 17 and 19 of its ‘362 Patent are not invalid as obvious combinations because CoolIT failed to present evidence on motivation to combine and reasonable expectation of success in making those alleged combinations. Second, Asetek argues that its accused Generation 5, 6, and 7 products do not infringe CoolIT’s ‘330, ‘284, and the ‘266 Patents under the proper construction of “plate.”

1. Validity of Asetek’s ‘362 Patent

A party seeking to invalidate a patent based on obviousness must prove by clear and convincing evidence that a skilled artisan would

have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so. The presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact.

Novartis Pharms. Corp. v. W.-Ward Pharms. Int'l Ltd., 923 F.3d 1051, 1059 (Fed. Cir. 2019) (citations and quotation marks omitted); *accord Asia Vital Components Co. v. Asetek Danmark A/S*, 377 F. Supp. 3d 990, 1011 (N.D. Cal. 2019) (“In order to survive summary judgment, [CoolIT] must provide evidence that . . . clearly and convincingly shows ‘that a person of ordinary skill in the art would have been motivated to combine the prior art in the way claimed by the ‘362 Patent claims at issue and had a reasonable expectation of success in doing so.’”) (citation omitted)). Therefore, summary judgment of non-obviousness is appropriate where the party challenging patent validity fails to show the existence of clear and convincing evidence supporting the factual bases of the legal conclusion of obviousness. *See, e.g., Eisai Co. v. Dr. Reddy’s Labs., Ltd.*, 533 F.3d 1353, 1356, 1358-59 (Fed. Cir. 2008) (affirming district court’s grant of summary judgment of non-obviousness for failure to provide any reason why a skilled artisan would have modified a known compound to arrive at the claimed invention); *see also Mytee Products, Inc. v. Harris Research, Inc.*, 439 Fed. Appx. 882, 886 (Fed. Cir. 2011) (affirming district court’s grant of summary judgment of non-obviousness for failing to “provide any reason why a person of ordinary skill would have been motivated to combine the references”).

According to CoolIT’s expert, Dr. Abraham, prior arts Wu, Ryu, Batchelder, and Yu disclose liquid cooling inventions attempting to solve similar issues. *See* Docket No. 423-12, Ex. 11 (Abraham Invalidity Rep.) ¶¶ 695-97, 701-05. Therefore, a person ordinarily skilled in the art (“POSITA”) would have been motivated to combine them to create an invention similar to the ‘362 Patent. *See id.* Asetek argues that CoolIT fails to identify evidence that clearly and convincingly shows that a POSITA would have been motivated to combine the prior art and would have had reasonable success in doing so. Docket No. 451 (Asetek Reply) at 13. CoolIT responds that CoolIT’s expert explains the motivation to combine the references and the reasonable expectation of success in combining them. According to CoolIT, whether the expert’s explanations are sufficient is a question of fact that should be decided by the jury. Docket No. 423

(Asetek Opp’n) at 2, 9, 25 (citing *In re Stepan Co.*, 868 F.3d 1342, 1346 (Fed. Cir. 2017); *Cumberland Pharms. Inc. v. Mylan Institutional LLC*, 846 F.3d 1213, 1222 (Fed. Cir. 2017) (“Whether a person of ordinary skill in the art would have been motivated to modify or combine teachings in the prior art, and whether he would have had a reasonable expectation of success, are questions of fact.”)).

While it is true that motivation to combine is a question of fact, mere conclusory arguments by an expert without factual support are not “sufficient for the question of obviousness to reach the jury.” *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1327 (Fed. Cir. 2012) (requiring explanation of “how specific references could be combined . . . or how any specific combination would operate or read on the asserted claims). In the expert report, Dr. Abraham merely copies and pastes blocks of quotes from the relevant prior art that describes the necessity to cool the heat generated from the CPU through an efficient water-cooled cooling system. Asetek Opp’n at 24-25; Docket No. 423-12, Ex. 11 (Abraham Invalidity Rep.) ¶¶ 697, 701, 703, 705. He then explains that “because [the prior art] are attempting to solve similar issues and each disclose or teach known techniques that can be used for one another, a POS[IT]A, when reading them together, would have been motivated to combine . . . [prior art].” *Id.* ¶¶ 702, 704, 706.

[E]ach of the prior art references cited herein provide sufficient detail to enable a person of ordinary skill in the art to practice the asserted claims without undue experimentation, and when used in combination, would provide a POSA with a reasonable expectation that the combination would be successful. That is, even if there were a requirement that each prior art reference be enabling, those references would satisfy such a requirement.

...

[E]ach of the ... Shin, Ryu, ... Wu, Yu, [and] Batchelder ... references enables a POSA to build and practice the disclosed cooling devices for their intended purposes. Each reference provides detailed drawings, figures, and/or schematics showing the structures of the disclosed cooling devices and their arrangements when used with the heat generating components that the cooling devices are supposed to cool. Each reference also provides detailed descriptions and/or drawings, figures, and/or schematics showing the inner workings of the disclosed cooling devices and how the cooling fluid flows through them. The references also all disclose or teach conventional components that would have been well known by a POSA, who would have been able to put them together in a known

way with predictable results and a reasonable expectation of success.

Id. ¶¶ 712-13.

Therefore, Dr. Abraham merely describes the problem each of the prior art attempted to solve and that it was possible to combine them. However, “knowledge of a problem and motivation to solve it are entirely different from motivation to combine particular references.” *TQ Delta, LLC v. CISCO Sys., Inc.*, 942 F.3d 1352, 1360 (Fed. Cir. 2019); *Securus Techs., Inc. v. Glob. Tel*Link Corp.*, 701 F. App’x 971, 977 (Fed. Cir. 2017) (“Securus failed to explain how or why the skilled artisan would combine the teachings . . . a broad characterization of Susen and Gainsboro as both falling within the same alleged field of ‘telecommunications monitoring and control,’ . . . is not enough for Securus to meet its burden of presenting a sufficient rationale to support an obviousness conclusion.”). Like *Securus*, CoolIT’s “broad characterization” of the prior art in describing similar issues in the field of cooling devices is insufficient to support obviousness. Furthermore, merely stating that “one in the field . . . *could* combine the[] references” is insufficient. The party asserting obviousness must provide a “meaningful explanation for why one of ordinary skill in the art would be motivated to combine [the particular] references at the time of this invention.” *InTouch Techs., Inc. v. VGO Commc’ns, Inc.*, 751 F.3d 1327, 1353-54 (Fed. Cir. 2014). The failure “to explain why a person of ordinary skill in the art would have combined elements from specific references *in the way the claimed invention does*” means that “the motivation . . . is asserted so generically as to be legally insufficient.” *ActiveVideo*, 694 F.3d at 1328 (emphasis added); *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 784, 797 (Fed. Cir. 2021) (citations omitted). The expert in *Intel Corp.* “indicated precisely how and why a skilled artisan would have combined the references” unlike the expert testimony in *ActiveVideo*, which “bore ‘no relation to any specific combination of prior art elements . . . from specific references.’” *Id.* at 797.

In addition, Dr. Abraham merely provides one conclusory sentence that: “[w]hen the cited references are combined or modified as a POS[IT]A would have been motivated to do, the combination or modification is also based on conventional or known methods that would have yielded predictable results and been reasonably expected to be successful by a POS[IT]A.” *Id.*

¶ 714. This conclusory assertion is insufficient show reasonable expectation of success. *See MediaTek, Inc. v. Freescale Semiconductor, Inc.*, No. 11-CV-5341 YGR, 2014 WL 2854705, at *7 (N.D. Cal. June 20, 2014) (granting summary judgment because “[the defendant] merely offers [expert] opinion that it is possible to combine the references and that a POSITA would have been motivated to do so. [The expert] Report is entirely too conclusory to create a genuine factual dispute.”); *Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1335 (Fed. Cir. 2013) (“Even assuming that a person of ordinary skill might have some motivation to [combine], the record does not show any reasonable expectation that this significant change would be successful.”).

For the foregoing reasons, CoolIT’s obviousness theory is insufficient to raise a triable issue of fact. Accordingly, the Court **GRANTS** Asetek’s motion for summary judgment and finds the ‘362 Patent valid.

2. Noninfringement of CoolIT’s ‘330, ‘284, and ‘266 Patents and the Construction of “Plate”

CoolIT’s patents claim a fluid heat exchanger with “a plate overlying the walls [defining a corresponding plurality of microchannels].” ‘266 Patent, Claim 1. The critical issue here is whether the “plate” in the context of CoolIT’s invention can be made of any material (*i.e.*, compliant material like a gasket) or must be made of rigid material. Docket No. 394 (Asetek MSJ) at 7; Asetek Opp’n at 15. The issue is whether a thin, flat rubber structure falls within the meaning of the term “plate.” *Id.* This Court previously issued two claim construction orders construing several claim terms at issue in the patents-in-suit, but neither party proposed a construction for “plate,” and the Court never construed this term. *See* Claim Construction Order at 25-29; Docket No. 149. According to Asetek, its products do not infringe CoolIT’s claims because the alleged “plate” in its accused products is made of a compliant material—*i.e.*, EPDM rubber—a not rigid material as it contends is required by CoolIT’s patents. Asetek MSJ at 6.

a. The ‘266 IPR

On October 12, 2021, the PTAB issued a FWD finding some of the asserted claims of the ‘266 Patent unpatentable and some of the asserted claims patentable. *See generally* ‘266 FWD. This decision came more than a month after the close of fact discovery in this case and almost a

month after the parties exchanged initial expert reports on September 16, 2021. Asetek Reply at 1. Representative claim 1, which was considered by the PTAB, read as follows:

1. A heat exchange system comprising:

a housing defining a recessed region and an outlet port fluidically coupled with the recessed region;

a heat sink having a plurality of juxtaposed fins defining a corresponding plurality of microchannels between adjacent fins; a manifold body at least partially defining an opening overlying the microchannels,

wherein the manifold body defines a pair of compliant surfaces flanking the opening,

wherein the compliant surfaces urge against the fins, defining a flow boundary of the microchannels,

wherein the opening extends transversely relative to the fins and is configured to distribute a working fluid among the microchannels,

wherein the manifold body partially occupies the recessed region of the housing, leaving a pair of opposed portions of the recessed region unfilled, defining opposed exhaust manifold portions flanking the opening and being configured to receive the working fluid from the microchannels, and

wherein the housing further defines an outlet plenum configured to receive the working fluid from the exhaust manifold portions and to convey the working fluid to the outlet port.

‘266 Patent at 19:62-20:20.

In opposing invalidity challenges under sections 102 (anticipation) and 103 (obviousness) at IPR, CoolIT argued that claim 1 was entitled to the priority date of the 2007 Provisional Application and, therefore, not anticipated by the alleged prior art. ‘266 FWD at 26. “Patents are entitled to the priority date of an earlier-filed application, only if the earlier-filed application contains adequate written description to support the subsequent claims.” *Hologic, Inc. v. Smith & Nephew, Inc.*, 884 F.3d 1357, 1361 (Fed. Cir. 2018); *accord Paice LLC v. Ford Motor Co.*, 881 F.3d 894, 906 (Fed. Cir. 2018) (“For claims to be entitled to a priority date of an earlier-filed application, the application must provide adequate written description support for the later-claimed limitations.”). According to Asetek, the 2007 Provisional did not disclose a manifold body

1 defining a pair of compliant surfaces, and thus CoolIT was not entitled to the earlier priority date.
 2 *Id.* at 21-22. Asetek argued that the first disclosure of any compliant surface took place in a
 3 separate 2011 Provisional. *Id.* CoolIT responded that the ‘266 Patent claims were entitled to the
 4 2007 priority date because the 2007 Provisional showed that “the inventor had possession of a
 5 manifold body made of complaint material, namely plate 240.” ‘266 FWD at 22-23; Asetek Reply
 6 at 11.

7 The PTAB found CoolIT’s argument unconvincing and determined that there was no
 8 written description support for “manifold body defin[ing] a pair of compliant surfaces” in the 2007
 9 Provisional. ‘266 FWD at 23-24. The PTAB explained:

10 [W]e determine that the 2007 Provisional does not contain a
 11 disclosure that would have conveyed to a POSITA that the inventor
 12 had possession of a “manifold body defin[ing] a pair of compliant
 13 surfaces” of the type required by claim 1.

14
 15 We have reviewed the 2007 Provisional in its entirety, and nothing
 16 in the 2007 Provisional describes the material of which plate 240 is
 17 made, much less indicates that the inventor had possession of an
 18 invention including a manifold body (*i.e.*, plate 240) defining a pair
 19 of compliant surfaces.

20
 21 The inventor’s substitution of the phrase “rigid plate” for the phrase
 22 “plate 240” is objective, intrinsic evidence that as of 2012,] the
 23 inventor considered plate 240 (which he was contrasting with
 24 compliant insert 334) to be made of a rigid, rather than compliant,
 25 material.

26
 27 Nothing in the 2007 Provisional would have indicated to a POSITA
 28 that the inventor envisioned making plate 240 of a compliant
 material in order to perform a gasketing or sealing function.

29 *Id.* at 23-26, 28-29.

30 However, while the PTAB found that CoolIT was not entitled to the 2007 priority date due
 31 to lack of written description for a compliant “manifold body,” the parties did not dispute the
 32 meaning of “plate,” and the PTAB did not construe the term “plate.” *See id.* at 11-15, 23, 30.

33 ² The ‘266 Patent is a continuation of an application filed in 2012. ‘266 FWD at 25, n.16. The
 34 2012 application of the ‘266 Patent replaced “plate 240” with “rigid plate,” which the PTAB found
 35 evidenced that plate 240 was rigid, not compliant. *See* ‘266 FWD at 25-26.

b. Estoppel

A party is collaterally estopped from relitigating an issue if: “(1) a prior action presents an identical issue; (2) the prior action actually litigated and adjudged that issue; (3) the judgment in that prior action necessarily required determination of the identical issue; and (4) the prior action featured full representation of the estopped party.” *Stephen Slesinger, Inc. v. Disney Enterprises, Inc.*, 702 F.3d 640, 644 (Fed. Cir. 2012). Issue-preclusion can apply in a second action even when the first “action” was before an agency. *Power Integrations, Inc. v. Semiconductor Components Indus., LLC*, 926 F.3d 1306, 1311 (Fed. Cir. 2019). PTAB decisions in IPR proceedings can trigger issue preclusion once they become final. *Id.*; *Papst Licensing GMBH & Co. KG v. Samsung Elecs. Am., Inc.*, 924 F.3d 1243, 1251 (Fed. Cir. 2019).

Based on CoolIT’s prior arguments at the PTAB and its final decision, Asetek seeks to estop CoolIT from asserting that a “plate” may be made of compliant materials, seeks claim construction that a “plate” is made of rigid material, and alternatively, asks this Court to grant summary judgment of invalidity of the CoolIT patents under Section 112 because the PTAB has found that the 2007 Provisional does not provide written description support for the full scope of “plate.” Asetek argues that the FWD already found that the 2007 Provisional does not provide written description support for a “plate” made of compliant material because, at the time of the alleged invention in 2007, the inventor considered the claimed “plate” (“plate 240”) to be made of rigid material. Asetek MSJ at 9; Asetek Reply at 2. Therefore, CoolIT’s attempt to construe the term “plate” to include plates made of compliant materials goes beyond the written description and is improper. Asetek Reply at 9. According to Asetek, CoolIT had a full and fair opportunity to show written description for “plate” because there is no distinction between the terms “plate” and “manifold body” in the context of CoolIT patents.³ Asetek Reply at 11.

³ Asetek also argues that CoolIT’s argument that the patent has no material requirement for plates is inconsistent with its expert’s prior argument at IPR that the patent disclosure teaches a “few material choices” and that a POSITA would likely choose a non-rigid material for plate 240. *Id.* at 7-8. However, these arguments are not necessarily inconsistent. CoolIT’s expert testified at IPR that the patent does not “explicitly stat[e] the material choice . . . for plate 240; but . . . [the disclosures] will define to a POSITA a few material choices that could be used to make the plate 240[.]” Docket No. 451-6 (2/19/2021 Pokharna Depo.) at 54:2-10. The expert then testified that it would be unlikely that a POSITA would choose a rigid material over a compliant material. *Id.*

Asetek's collateral estoppel argument fails because the issue at IPR and the issue currently at hand are not identical. It is true that the PTAB resolved the specific issues that: "manifold body" and plate 240 as appearing in the specification are rigid, the inventor was not in possession of a compliant manifold body recited in claim 1, relevant priority date is the filing date of the 2011 Provisional, and claims 1 and 9 are therefore anticipated by a 2010 prior art.⁴ See '266 FWD at 30. Re-litigation of these precise issues would be barred under collateral estoppel. However, the effect of such estoppel—the determination of rigidity of manifold bodies and plate 240 in claims 1 and 9—does not extend to the "plates" in claims 13 and 15 currently at issue. To extend estoppel to all plates would either (1) improperly equate the term "plate" of claims 13 and 15 with "manifold body" of claim 1, and (2) would apply a limitation from one embodiment in the specifications to the entirety of the claims; plate 240 is only one embodiment in CoolIT's patents. See '266 Patent, Figs. 5-6; '284 Patent, Figs. 4-5; '330 Patent, Figs. 4-5.

The terms "plate" and "manifold body" are not used interchangeably in the patents. For example, Claim 1 describes a heat system discussing a "manifold body" multiple times but does not mention any "plate." See '266 Patent, Claim 1 (describing a heat exchange system comprising a housing, "a heat sink having a plurality of juxtaposed fins defining a corresponding plurality of microchannels between adjacent fins," and "a **manifold body** at least partially defining an opening overlying the microchannels"). Claim 13, currently at issue, describes a fluid heat exchanger that discusses a "plate" but not a "manifold body." See '266 Patent, Claim 13 (the heat exchanger comprising "a plurality of walls defining a corresponding plurality of microchannels," "**a plate** overlying the walls," "a seal, wherein the **seal is a portion of the plate**," a fluid inlet passage, and a fluid outlet passage). Furthermore, Claim 16 makes clear that a "plate" and a "manifold body" are not interchangeable terms. Claim 16 describes a "fluid heat exchanger according to claim 12, wherein **a plate and a seal comprise a unitary manifold body** defining a pair of compliant

at 54:2-10. This testimony does not imply a requirement and is consistent with the current testimony that there is no material requirement that the plate must be rigid and that it may be made of compliant materials.

⁴ Claims 2, 4, 5 were also found unpatentable on § 103 grounds, and claims 13-15 were found to be not unpatentable on § 103 grounds. *Id.*

surfaces flanking the one aperture through which the heat exchange fluid is delivered to each of the microchannels.” *See* ‘266 Patent, Claim 16. Claim 12 describes “[t]he heat-exchange module according to claim 1, wherein the compliant surfaces of the manifold body conform to and seal against the fins, inhibiting the working fluid from bypassing the plurality of microchannels.” *See* ‘266 Patent, Claim 12. In sum, Claim 16 describes a heat exchange module of claim 1, wherein a plate and a seal together comprise the compliant manifold body that conforms to and seals against the fins. Therefore, the language of Claim 16 suggests that a “plate” can form a “manifold body” together with a seal, but does not require that they be equivalent.

While CoolIT seems to have previously argued that plate 240 *specifically* is a manifold body and is made of compliant material, this was only discussed in the context of *plate 240 as a manifold body*. Docket No. 394-11 at 21-22 (IPR Response Brief) (arguing that claims 1, 2, 4, 5, and 9 were entitled to a 2007 priority date because the 2007 Provisional disclosed a compliant plate 240, and therefore, the inventor was in possession of a compliant manifold body). As such, although CoolIT is estopped from arguing that plate 240, which it argued constituted a manifold body, is compliant, plate 240 is only one embodiment in CoolIT’s patents. The Court cannot read the “rigid” limitation of plate 240 to the term “plates” as used throughout the ‘266, ‘330, and ‘284 Patents because “[i]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims.” *Openwave Sys., Inc. v. Apple Inc.*, 808 F.3d 509, 514 (Fed. Cir. 2015) (citation omitted). Thus, any estoppel regarding plate 240 and “manifold body” is not dispositive of the construction of the term “plate.”

c. Belated Claim Construction Request

“[C]laim construction presents a question of law for the Court to decide. As such, the Federal Circuit has held that claims may be construed by way of a motion for summary judgment.” *Aircraft Tech. Publishers v. Avantext, Inc.*, No. C 07-4154 SBA, 2009 WL 3817944, at *3 (N.D. Cal. Nov. 10, 2009); *Laitram Corp. v. Morehouse Indus., Inc.*, 143 F.3d 1456, 1462 (Fed. Cir. 1998). However, courts are not obligated to hear and rule on belated claim construction arguments raised for the first time in summary judgment briefing. *See SanDisk Corp. v. Memorex Prod., Inc.*, 415 F.3d 1278, 1292 (Fed. Cir. 2005) (affirming district court’s refusal to entertain

untimely claim construction arguments under the patent local rules). Untimely claim construction arguments raised for the first time in summary judgment briefs may nevertheless be considered as “part of the infringement analysis, not part of the claim construction.” *Apple, Inc. v. Samsung Elecs. Co.*, No. 12-CV-00630-LHK, 2014 WL 252045, at *4 (N.D. Cal. Jan. 21, 2014) (quoting *Thorner v. Sony Computer Ent. Am. LLC*, 669 F.3d 1362, 1369 (Fed. Cir. 2012)). To that end, a court’s role is to “view the parties’ disputes through the lens of whether a reasonable jury, armed with the Court’s claim construction as to certain terms and an instruction that the plain and ordinary meaning controls as to others, could or would necessarily conclude that the asserted claim reads on an accused device (or that a prior art reference reads on an asserted claim).” *Id.* at *5.

Asetek asks the Court to exercise its discretion to construe the term “plate” even if estoppel does not apply. According to Asetek, claim construction of “plate” has become necessary following the PTAB’s FWD. Asetek MSJ at 6. Asetek asks that the term “plate” should be construed as a “flat manifold body made of a rigid material.” *Id.* CoolIT asks the Court to apply the plain and ordinary meaning of “plate” because Asetek’s request for claim construction is untimely under the Patent Local Rules and Fed. R. Civ. P. 26(e), 37(c)(1), as the Court has already considered two rounds of claim constructions. Asetek Opp’n at 8-9, 13 (citing *Fujifilm Corp. v. Motorola Mobility LLC*, No. 12-CV-03587-WHO, 2015 WL 757575, at *11 (N.D. Cal. Feb. 20, 2015)) (“As [the term] was not construed during claim construction, I give the term the “full range” of its plain and ordinary meaning, “according to the customary understanding of a person of ordinary skill in the art who reads [it] in the context of the intrinsic record.” (quoting *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001), *Agilent Techs., Inc. v. Affymetrix, Inc.*, 567 F.3d 1366, 1376 (Fed. Cir. 2009)); *SanDisk Corp.*, 415 F.3d at 1292 (affirming district court refusal to entertain untimely claim construction arguments under the patent local rules)); Asetek Opp’n at 8-9 (quoting *Verinata Health, Inc. v. Sequenom, Inc.*, No. C 12-00865 SI, 2014 WL 4100638, at *3 (N.D. Cal. Aug. 20, 2014) (“Given the purpose behind [these] disclosure requirements, a party may not use an expert report to introduce new infringement theories, new infringing instrumentalities, new invalidity theories, or new prior art references not disclosed in

the parties' infringement contentions or invalidity contentions.")).

Asetek first argues that its belated request is justified because this possible claim construction never came up during the IPR proceedings, which were focused on the written description requirement for a compliant plate, not whether the plate was made of compliant material. Asetek Reply at 2. The additional finding regarding the plate's material was unanticipated, and thus Asetek contends it did not strategically withhold the construction of "plate" from the prior two claim constructions. *Id.* Therefore, Asetek argues that it timely met its disclosure obligations under Fed. R. Civ. P. 26. *Id.* at 3 (citing Fed. R. Civ. P. 26(e)(1)(A) (requiring supplementation or correction of discovery responses "in a timely manner . . . if the additional or corrective information *has not otherwise been made known to the other parties during the discovery process or in writing.*") (emphasis in original)).

It is true that Asetek's failure to seek construction of the term "plate" prior to the FWD does not seem to be gamesmanship on their part, as this issue became apparent to Asetek only after the FWD. Notably, neither party considered this term to have any technical significance or limitations in the last two rounds of claim construction. But Asetek did not timely seek to amend its invalidity contentions or notify the Court and CoolIT that additional claim construction may be required, even though the October 12, 2021 FWD was issued two months before it first raised this possible construction. Asetek's expert, Dr. Tuckerman, also did not address the written description for "plate" in his Invalidity Report. Asetek Opp'n at 12; Asetek Opp'n at 4. The new "plate" issue first surfaced in Dr. Tuckerman's non-infringement rebuttal report on December 8, 2021. As such, the belated request for claim construction is untimely. Furthermore, Asetek's representation that CoolIT had the opportunity to "extensively" question Dr. Tuckerman regarding the claim term "plate" during his deposition is incorrect. *See* Asetek Reply at 3. In Dr. Tuckerman's deposition, Dr. Tuckerman merely responded that there is no specific construction on the term "plate" from the court and discussed the plate in its plain and ordinary meaning. *See* Docket No. 451-4, Ex. C (12/22/2021 Dr. Tuckerman Depo.) at 177:14-188:23. In response to a question about the '266 FWD, he merely responded: "I would have to re-read the report in detail

1 to see if they construed the term ‘plate.’”⁵ *Id.* at 188:10-13.

2 Asetek next notes that this Court left open the possibility for additional claim construction.
3 After Asetek’s ‘567 patent’s⁶ FWD was issued on September 30, 2021, CoolIT’s counsel sought
4 additional claim construction at a hearing before this Court on October 7, 2021. *See* Asetek Reply
5 at 5-6. This Court noted that “[i]f something is absolutely necessary, the Court will do it” if the
6 Court “is convinced that it is necessary.” *Id.* at 6. However, unlike the previous instance where
7 Asetek brought up the issue just a week after the FWD, Asetek waited for two months before
8 raising the issue for the first time in a rebuttal expert report and six months to make the request to
9 the court when Asetek knew about CoolIT’s “plate” interpretation after receiving CoolIT’s July
10 2019 infringement contentions. Asetek Opp’n at 21 (citing *O2 Micro Int’l Ltd. v. Monolithic*
11 *Power Sys., Inc.*, 467 F.3d 1355, 1367 (Fed. Cir. 2006) (affirming district court ruling that three-
12 month delay was not diligent); *Word to Info Inc. v. Facebook Inc.*, No. 15-CV-03485-WHO, 2016
13 WL 6276956, at *6 (N.D. Cal. Oct. 27, 2016), *aff’d*, 700 F. App’x 1007 (Fed. Cir. 2017) (four-
14 month delay after receiving opposing counsel’s proposed construction was not diligent)). As such,
15 Asetek’s request is untimely.

16 Second, even if Asetek’s request is untimely, Asetek argues that “plate” must be construed
17 because the experts’ disagreement regarding the material of “plate” shows that it is a technical
18 term that does not have a plain and ordinary meaning in the field of computer liquid cooling and to
19 force the jury to decide the issue of the claim scope would constitute legal error. Asetek MSJ at 8-
20 9 (citing *Eon Corp. IP Holdings v. Silver Spring Networks*, 815 F.3d 1314, 1319 (Fed. Cir. 2016)
21 (finding that leaving the question of claim scope to the jury is legal error)); Asetek Reply at 6-7
22 (citing *Apple, Inc. v. Samsung Elecs. Co.*, No. 12-CV-00630-LHK, 2014 WL 660857, at *3 (N.D.
23 Cal. Feb. 20, 2014) (“Arguing claim construction to the jury is inappropriate because it risks

24
25 ⁵ Asetek also points out that CoolIT’s expert himself did not supplement his Infringement Report
26 nor substantively respond to the PTAB’s findings during his deposition in January 2022 despite
27 knowing that the PTAB disagreed with him. However, CoolIT would have had no reason to know
28 that Asetek would belatedly seek claim construction regarding this term rather than proceed with
its plain and ordinary meaning, especially when the PTAB’s FWD pertained to a written
description analysis for a priority determination on a different term (“manifold body”).

⁶ The ‘567 patent was found invalid by the PTAB.

1 confusion and the likelihood that a jury will render a verdict not supported by substantial
 2 evidence.”); *MediaTek inc. v. Freescale Semiconductor, Inc.*, No. 11-CV-5341 YGR, 2014 WL
 3 971765, at *5 (N.D. Cal. Mar. 5, 2014) (“[W]hile the court may, in its discretion, consider
 4 extrinsic evidence . . . such evidence, if required, is not appropriate for presentation to a jury and is
 5 properly excluded at trial.”).

6 CoolIT disputes Asetek’s argument that “plate” is a technical term that does not have a
 7 plain meaning and point out that “plate” is defined by structure and function, and a material
 8 requirement does not exist in any of the asserted CoolIT patents. Asetek Opp’n at 16-17. CoolIT
 9 points to numerous scientific publications, patents, and cases that support that the plates are
 10 defined by structure and function to support that the use of non-rigid plates, including rubber, was
 11 well-known prior to August 2007.

12 The mere fact that the parties disagree on the plain meaning of the term does not
 13 necessarily mean that the term is a technical one requiring claim construction. In such cases,
 14 courts can construe the plain and ordinary meaning of the term.

15 The question is whether “plate” is a technical term that requires claim construction. The
 16 Court concludes it is not. Assuming that there are embodiments beyond plate 240, a plain and
 17 ordinary meaning to the term “plate” applies. A “plate” is a commonly used word, and neither
 18 party recognized any technical significance for this term until the FWD. *Summit 6, LLC v.*
 19 *Samsung Elecs. Co.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015) (finding that a term “is used in
 20 common parlance and has no special meaning in the art. Because the plain and ordinary meaning
 21 of the disputed claim language is clear, the district court did not err by declining to construe the
 22 claim term.”). Neither party claims that it has special meaning in the art. Rather, this new claim
 23 construction is one that stems from a priority dispute. The Court declines to construe the term
 24 “plate.”

25 To be sure, in determining whether a claim term is to be given its plain and ordinary
 26 meaning, the Court may consider “the written description and other parts of the specification,”
 27 which “may shed contextual light on the plain and ordinary meaning.” *Fujifilm Corp. v. Motorola*
 28 *Mobility LLC*, No. 12-CV-03587-WHO, 2015 WL 757575, at *6 (N.D. Cal. Feb. 20, 2015). In

1 *Apple v. Samsung*, Judge Koh found recognized the courts’ “duty to resolve fundamental disputes
 2 regarding claim scope[,]” but found that it “fulfilled that duty when it provided a thorough claim
 3 construction opinion earlier in the[] proceedings.” 2014 WL 252045, at *3 (citation omitted); *see*
 4 *also O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008).
 5 (“[D]istrict courts are not (and should not be) required to construe *every* limitation present in a
 6 patent’s asserted claims.”). However, Judge Koh considered the arguments as “part of the
 7 infringement analysis, not part of the claim construction” and explained that she would view the
 8 parties’ disputes over claim scope

9 through the lens of whether a reasonable jury, armed with the
 10 Court’s claim construction as to certain terms and an instruction that
 11 the plain and ordinary meaning controls as to others, could . . .
 12 conclude that the asserted claim reads on an accused device . . .
 13 Similar to claim construction, in determining whether an
 14 infringement . . . argument fits within the plain and ordinary
 15 meaning of a term, the Court reviews the written description and
 16 other parts of the specification, as those tools may shed contextual
 17 light on the plain and ordinary meaning. But the goal . . . is not to
 18 complete the Sisyphean task of providing definitive guidance as to a
 19 term’s plain and ordinary meaning. Instead, the Court must
 20 determine whether a jury, free to rely on the plain and ordinary
 21 meaning of the terms, may . . . conclude that the accused devices
 22 infringe the asserted claims.

23 *Apple*, 2014 WL 252045, at *5 (internal quotation marks, citations, and modifications omitted).
 24 Therefore, “parties may ‘introduce evidence as to the plain and ordinary meaning of terms not
 25 construed by the Court to one skilled in the art,’ so long as the evidence does not amount to
 26 ‘arguing claim construction to the jury[.]’ *Huawei Technologies, Co, Ltd*, 340 F. Supp. 3d at 949
 27 (quoting *Apple*, 2014 WL 660857, at *3). In *Fujifilm Corp. v. Motorola Mobility LLC*, No. 12-
 28 CV-03587-WHO, 2015 WL 757575, at *6 (N.D. Cal. Feb. 20, 2015), Judge Orrick similarly
 considered “the written description and other parts of the specification,” as well as the
 “prosecution history too, as part of the intrinsic record,” in determining the plain and ordinary
 meaning of each disputed term. He declined to “provid[e] definitive guidance as to [each] term’s
 plain and ordinary meaning” because the district court is not obligated to decide precisely what the
 plain and ordinary meaning of the term is. *Id.* at *4–6. In declining to decide on a precise
 definition to ascribe to the plain and ordinary meaning of a disputed term past the claim

1 construction stage, another court explained that it would “give those terms ‘full range’ of their
 2 plain and ordinary meaning,” “according to the customary understanding of a person of ordinary
 3 skill in the art who reads [it] in the context of the intrinsic record.” *Gutterglove, Inc. v. Am. Die &
 4 Rollforming, Inc.*, No. 2:16-CV-02408-WHO, 2018 WL 2356756, at *7 (E.D. Cal. May 24, 2018)
 5 (first quoting *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001), then quoting
 6 *Agilent Technologies, Inc. v. Affymetrix, Inc.*, 567 F.3d 1366, 1376 (Fed. Cir. 2009)). “This . . .
 7 does not improperly delegate claim construction to the jury.” *Id.* (citing *Function Media, L.L.C. v.
 8 Google, Inc.*, 708 F.3d 1310, 1325 (Fed. Cir. 2013) (“[T]he denial of a pretrial motion for
 9 summary judgment of noninfringement does not, by itself, show that the district court delegated
 10 claim construction to the jury.”)).

11 Even considering the intrinsic record, the Court declines to construe the term “plate.”⁷ As
 12 discussed above, the rigid plate 240 as noted by the PTAB represents only one embodiment, and
 13 the discussion of this embodiment relates to a “manifold body” and not a “plate.” Thus, CoolIT’s
 14 discussion of plate 240 – an embodiment – “did not amount to lexicography or disavowal.”
 15 *Augme Techs., Inc. v. Yahoo! Inc.*, 755 F.3d 1326, 1339–40 (Fed. Cir. 2014); *Intamin Ltd. v.
 16 Magnetar Techs., Corp.*, 483 F.3d 1328, 1335 (Fed. Cir. 2007) (finding improper the district
 17 court’s limitation of the term “intermediary” to non-magnetic intermediaries based on an
 18 embodiment when the “overall context of the patent . . . d[id] not specifically disavow magnetic
 19 intermediaries”); *see also SkinMedica, Inc. v. Histogen Inc.*, No. 09-CV-122 JLS NLS, 2011 WL
 20 2066619, at *8 (S.D. Cal. May 24, 2011) (“[T]he overall context of the patents does not disavow
 21 the use of structures other than a mesh or porous framework. The references [the defendant] cites
 22 . . . do not expressly limit the entire invention but only describe a single embodiment.”). Nor is
 23 there anything else in the intrinsic record or in any extrinsic evidence that suggests the term
 24 “plate” as used in claims 13 and 16 of the ‘266 Patent is to be accorded a special technical
 25 meeting. As such, Asetek is not entitled to a claim construction that the plain and ordinary
 26

27 ⁷ Asetek also concedes that the Court “retains discretion to hear belated claim construction
 28 arguments.” Asetek MSJ Reply at 3 (citing *Bos. Sci. Corp. v. Johnson & Johnson*, 534 F. Supp.
 2d 1062, 1074 (N.D. Cal. 2007); *SanDisk Corp.*, 415 F.3d at 1292).

meaning of “plate” should be limited to rigid plates.

d. Invalidity Due to Lack of Written Description

The written description requirement is set forth in 35 U.S.C. § 112, which provides in pertinent part that:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

35 U.S.C. § 112, ¶ 1. “To satisfy the written description requirement, the applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and demonstrate that by disclosure in the specification of the patent.” *Flash-Control, LLC v. Intel Corp.*, No. 2020-2141, 2021 WL 2944592, at *3 (Fed. Cir. July 14, 2021) (citation omitted). Whether the written description adequately supports a patent claim is a question of fact. *Id.*

Asetek argues that if the Court construes plate broadly to include manifold bodies made of compliant materials, the claims should be found invalid for lack of written description because CoolIT cannot show that the inventor possessed the full scope of the claims (that it included plates made of compliant material) at the time of the invention in August 2007 under 35 U.S.C. § 112. Asetek MSJ at 20. Asetek argues that “CoolIT is issue-precluded from relitigating written description support for compliant manifold bodies in the district court as this exact written description issue was previously adjudicated in the IPR proceeding between the same parties.” *Id.* Again, this argument fails; Asetek only shows that plate 240 (an embodiment) was rigid, not that “plates” generally as discussed in claim 13 and 16 must be rigid. The term is entitled to its plain and ordinary meaning. As such, Asetek has not shown by clear and convincing evidence that the specification failed to contain a written description of the invention. Accordingly, the Court **DENIES** Asetek’s motion for judgement of non-infringement of the ‘330, ‘284, and ‘266 Patents.

B. CoolIT’s Motion for Summary Judgment

CoolIT moves for summary judgment of (1) validity of the CoolIT patents because Asetek

fails to show that the Antarctica sample is prior art, and (2) noninfringement because Asetek's '362 Patent requires curved blades and a single-receptacle reservoir whereas CoolIT accused Tamriel design has straight blades and does not possess a "single receptacle." Rather, Tamriel employs two separable receptacles connected by way of tubing (a gasket).

1. Noninfringement – Curved Blades

Asetek alleges that non-curved blades are infringing under the DOE because its experts have shown that the CoolIT impeller is equivalent to a curved impeller as they perform substantially the same function, in substantially the same way, and produces substantially the same result, and any differences between them are insubstantial. Docket No. 426-3 (Ds' Opp'n) at 2. CoolIT argues that Asetek's theory fails because Asetek admits that the claimed "curved blades" are nonlinear while CoolIT's blades are linear. Ds' Reply at 1.

a. The Ensnarement Doctrine

"[A] doctrine of equivalents theory cannot be asserted if it will encompass or 'ensnare' the prior art." *G. David Jang, M.D. v. Bos. Sci. Corp.*, 872 F.3d 1275, 1285 (Fed. Cir. 2017) (citation omitted). A "[h]ypothetical claim analysis is a practical method to determine whether an equivalent would impermissibly ensnare the prior art." *Id.* (citation omitted).

Hypothetical claim analysis is a two-step process. The first step is "to construct a hypothetical claim that literally covers the accused device." Next, prior art introduced by the accused infringer is assessed to "determine whether the patentee has carried its burden of persuading the court that the hypothetical claim is patentable over the prior art." In short, [the court] ask[s] if a hypothetical claim can be crafted, which contains both the literal claim scope and the accused device, without ensnaring the prior art.

...

"The burden of producing evidence of prior art to challenge a hypothetical claim rests with an accused infringer, but the burden of proving patentability of the hypothetical claim rests with the patentee."

Id.

Claim 17 of the '362 Patent has a pump containing an "impeller having curved blades." '362 Patent, Claim 17 ("the pump including a motor and **an impeller having curved blades**, the impeller being positioned in the reservoir"). CoolIT argues that Asetek violates the ensnarement

1 doctrine because, during its prior trial against CMI, Asetek distinguished its purported invention
 2 from the Ryu prior art by stating that Ryu had straight blades (whereas Asetek’s invention had
 3 “curved blades”), and the *CMI* court confirmed this in its findings. Docket No. 387 (Ds’ MSJ) at
 4 15; Docket No. 387-22 (CMI case, Docket No. 249, Findings of Fact and Conclusions of Law) at
 5 20, 23 (“Ryu does not disclose or suggest an impeller having curved blades, a limitation of claims
 6 14 and 17 of the ’362 patent . . .”). Therefore, Asetek should not be now allowed to argue that an
 7 impeller having straight blades is equivalent to an impeller having curved blades. Ds’ MSJ at 15.

8 Asetek correctly points out that the “[t]he pertinent question . . . [is] whether that
 9 hypothetical claim could have been allowed by the PTO over the prior art.” Ds’ Opp’n at 12
 10 (citing *Abbott Lab’ys v. Dey, L.P.*, 287 F.3d 1097, 1105 (Fed. Cir. 2002)). Asetek proposes that
 11 the hypothetical claim is for a device with an “impeller having curved blades or other non-radial
 12 blades that perform like curved blades.” Ds’ Opp’n at 12.

13 In order for a hypothetical claim to be anticipated, “a single, prior art document [must]
 14 describe *every element* of the claimed invention, either expressly or inherently, such that a person
 15 of ordinary skill in the art could practice the invention without undue experimentation.” *Abbott*
 16 *Lab’ys v. Dey, L.P.*, 287 F.3d 1097, 1105–06 (Fed. Cir. 2002). Therefore, a district court cannot
 17 compare merely the equivalent limitation to the prior art “while ignoring other limitations of the
 18 claim.” *Id.* at 1106 (finding that the district court erred by comparing only one limitation of the
 19 claim to the prior art while ignoring other limitations of the claim).

20 CoolIT’s ensnarement doctrine argument fails because it only compares the impeller
 21 blades limitation – not the hypothetical claims as a whole. This argument especially lacks merit
 22 when CoolIT’s expert admits that Ryu does not disclose the “reservoir” limitation of claim 17.
 23 *See* Docket No. 396, Ex. AA (11/3/2021 Dr. Abraham Invalidity Rep.) ¶ 169. Furthermore,
 24 because it is not possible to determine whether Ryu’s straight blades would fall under “other non-
 25 radial blades that perform like curved blades” as described in Asetek’s hypothetical claim, Ds’
 26 Opp’n at 12, it is not possible to determine whether the hypothetical claim could have been
 27 allowed by the PTO to over Ryu. CoolIT fails to respond to Asetek’s opposition on their point,
 28 implicitly conceding that its argument fails. As such, the ensnarement doctrine does not bar

1 Asetek's claims.

2 b. The All-Elements Rule

3 The all-elements rule state that "[e]ach element contained in a patent claim is deemed
4 material to defining the scope of the patented invention, and thus the doctrine of equivalents must
5 be applied to individual elements of the claim, not to the invention as a whole." *Warner-*
6 *Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997). "[I]f a theory of equivalence
7 would entirely vitiate a particular claim element, partial or complete judgment should be rendered
8 by the court." *Id.* at 39 n. 8. The Federal Circuit further explained that:

9 "Vitiation" is not an exception to the doctrine of equivalents, but
10 instead a legal determination that "the evidence is such that no
11 reasonable jury could determine two elements to be equivalent."
12 The proper inquiry for the court is to apply the doctrine of
13 equivalents, asking whether an asserted equivalent represents an
14 "insubstantial difference" from the claimed element, or "whether the
15 substitute element matches the function, way, and result of the
16 claimed element." If no reasonable jury could find equivalence,
17 then the court must grant summary judgment of no infringement
18 under the doctrine of equivalents.

19 The vitiation concept has its clearest application "where the accused
20 device contain[s] the antithesis of the claimed structure." *Planet*
21 *Bingo, LLC v. GameTech Int'l, Inc.*[,] 472 F.3d 1338, 1345
22 (Fed.Cir.2006). This makes sense; two elements likely are not
23 insubstantially different when they are polar opposites. . . .
24 "[C]ourts should be cautious not to shortcut this inquiry by
25 identifying a 'binary' choice in which an element is either present or
26 'not present.' . . . The vitiation test cannot be satisfied merely by
27 noting that the equivalent substitute is outside the claimed
28 limitation's literal scope. Rather, vitiation applies when one of skill
in the art would understand that the literal and substitute limitations
are not interchangeable, not insubstantially different, and when they
do not perform substantially the same function in substantially the
same way, to accomplish substantially the same result. In short,
saying that a claim element would be vitiated is akin to saying that
there is no equivalent to the claim element in the accused device
based on the well-established "function-way-result" or
"insubstantial differences" tests.

To succeed on a doctrine of equivalents theory, the patentee must
demonstrate equivalence under one of these two tests. This will be
more difficult when the accused structure has an element that is the
opposite of the claimed element, especially where the specification
or prosecution history highlights the differences. If the claimed and
accused elements are recognized by those of skill in the art to be
opposing ways of doing something, they are likely not
insubstantially different.

1 *Brilliant Instruments, Inc. v. GuideTech, LLC*, 707 F.3d 1342, 1347–48 (Fed. Cir. 2013) (citation
2 omitted). However, “[c]haracterizing an element of an accused product as the ‘antithesis’ of a
3 claimed element is . . . a conclusion that should not be used to overlook the factual analysis
4 required to establish whether the differences between a claimed limitation and an accused
5 structure or step are substantial[.]” *Cadence Pharms. Inc. v. Exela PharmSci Inc.*, 780 F.3d 1364,
6 1372 (Fed. Cir. 2015) (citations omitted). “The determination of equivalence depends not on
7 labels like ‘vitiation’ and antithesis’ but on the proper assessment of the language of the claimed
8 limitation and the substantiality of whatever relevant differences may exist in the accused
9 structure.” *Id.*

10 The patent at issue requires “curved blades.” CoolIT argues that its blades are straight and
11 do not infringe; Asetek argues that the blades are not straight and can infringe under a DOE
12 theory. According to CoolIT, Asetek’s expert, Dr. Tuckerman, concedes that CoolIT’s blades “are
13 not literally curved,” admits that CoolIT’s blades are linear and that curved blades require non-
14 linearity. Ds’ MSJ at 3; Docket No. 447 (Ds’ Reply) at 2; Docket No. 386-5 (11/3/2021
15 Tuckerman Expert Infringement Rep.) ¶ 290. As such, the nonlinearity required by “curved
16 blades” specifically excludes “the CoolIT linear . . . blades” and precludes Asetek’s DOE theory.
17 *Id.* at 2 (citing *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1347
18 (Fed. Cir. 2001) (finding that the DOE is unavailable due under the vitiation theory because a
19 metallic device cannot be equivalent to the claimed non-metallic limitation)). According to
20 Asetek, curved does not mean nonlinear; rather, it is the radiality of the blades that is dispositive.
21 Ds’ Opp’n at 7. Asetek points out that its experts have testified that CoolIT’s blades are non-
22 radial, which is understood in pump technology to be not straight blades. *Id.*; Docket No. 387-19,
23 Ex. 23 (9/16/2021 Dr. Stein Expert Report) ¶ 7 (“I do not agree that the CoolIT impeller can be
24 referred to as straight-blade impeller because generally radial impellers . . . are known in the field
25 of pump technology as straight-blade . . . impellers. The CoolIT is not a radial impeller and thus
26 cannot be properly characterized as a straight blade impeller[.]”).

27 The Court finds that a conclusion of infringement under the DOE would vitiate the
28 “curved” limitation of the ‘362 patent. Asetek’s attempt to find equivalency between “curved”

blades and “non-radial blades” is unconvincing. Radiality refers to the angle of the blades to the axis of rotation rather than their shape. *See* 11/3/2021 Tuckerman Expert Infringement Rep. ¶ 292 (“a straight impeller is generally radial, i.e., the impeller blades are perpendicular to the axis of rotation . . . [while] blades . . . offset from the center of rotation [are] nonradial.”). The attempt to import a new concept of the radiality of the blades into the patent has no support in the intrinsic record, and Asetek’s own expert acknowledges that “curved” and “non-radial” are not equivalent terms.⁸ *See* Docket No. 387-18, Ex. 14 (12/30/2021 Tuckerman Depo.) at 56:14-57:4 (“[Curved blade is] a subset of the class of nonradial blades . . . [Curved blades and non-radial blades are] not identical terms”). By attempting to import non-radial blades in the claim, Asetek attempts to include a larger subset of blades based on a different criterion pertaining to the angle rather than shape.

The Court does not agree with Asetek that *DePuy* is analogous. *See DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1016 (Fed. Cir. 2006) (finding that applying DOE to cylindrical-conical shape of a device would not vitiate a “spherically-shaped” limitation). Unlike *DePuy*, “curved” and “straight” as used here are opposing terms rather than merely different types of shapes. This is particularly so in light of the prior art which Asetek sought to avoid. As noted above, “straight” blades were specifically argued as and found to be the distinguishing feature between prior art and the ‘362 patent in the CMI case. *See* CMI case, Docket No. 249, Findings of Fact and Conclusions of Law at 20, 23 (“Ryu discloses straight-edged blades that are not curved . . . Ryu does not disclose or suggest an impeller having curved blades, a limitation of claims 14 and 17 of the ‘362 patent . . .”). Asetek’s attempt to read a larger subset of “non-radial” blades based on a different criterion renders the shape requirement meaningless. This case is, therefore, similar to *Tronzo*, which held that allowing any shape to be equivalent to the “conical limitation” would impermissibly write out the limitation. *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1160 (Fed. Cir. 1998) (finding that where expert testified that a conical-shaped part of an artificial hip socket and a hemispherical shaped part would be

⁸ The Court also finds Asetek’s argument that CoolIT’s blades are not straight because they are non-radial unconvincing for the same reason.

equivalent, such a conclusion “would write the ‘generally conical outer surface’ limitation out of the claims”). Asetek’s attempt to argue that CoolIT’s straight blades are equivalent to curved blades of the ‘362 patent is therefore unconvincing.⁹ *But see Voda v. Cordis Corp.*, 536 F.3d 1311, 1325 (Fed. Cir. 2008) (affirming the district court’s finding of infringement of a “straight portion” limitation of a catheter by a curved portion under the DOE).

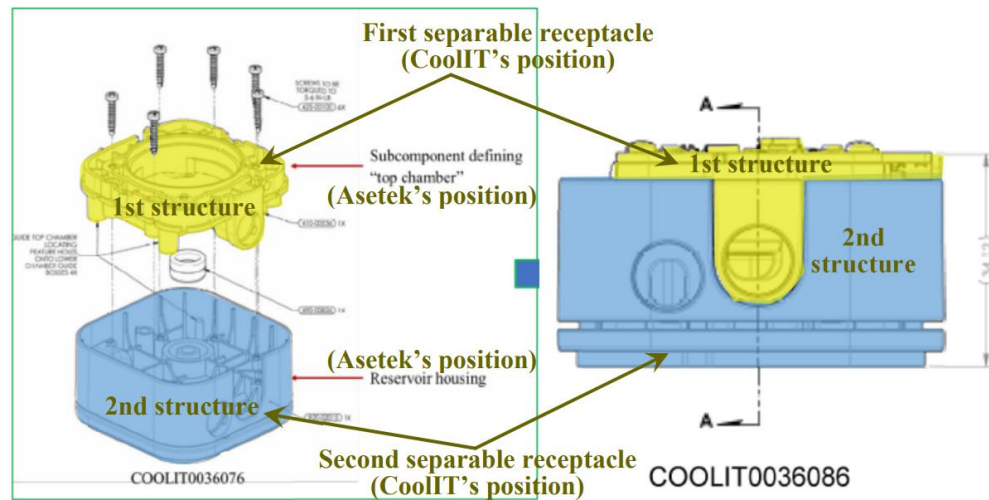
For the foregoing reasons, the Court finds that finding infringement under the DOE would have the effect of vitiating the “curved” limitation of the ‘362 patent and precludes infringement. As such, the Court **GRANTS** CoolIT’s motion for summary judgment of noninfringement on the curved blade limitation.

2. Noninfringement – Reservoir

Asetek’s invention contains a “reservoir including an upper chamber and a lower chamber.” ‘362 Patent, claim 17. Asetek alleges infringement under a DOE theory that the reservoir of the accused Tamriel device (which allegedly has multiple subcomponents) is interchangeable with the ‘362’s reservoir. Ds’ Opp’n at 19-20. The parties and this Court previously construed “chamber” as “compartment(s) *within* the reservoir” and “reservoir” as a “single receptacle defining a fluid flow path.” Joint Claim Construction Statement at 2-3; Docket Nos. 104 at 9, 237 at 3; Claim Construction Order at 5. The parties’ stipulation is based on the jury verdict in the CMI case that a “reservoir” is a “single receptacle” that is divided into an upper chamber and a lower chamber, with the upper chamber providing the pumping function and the lower chamber providing the thermal exchange function. *See* Estoppel Joint Statement at 2.

⁹ Asetek also unsuccessfully attempts to argue that “curved” does not describe the shape of the blade, and that a difference in shape between the claim element and the equivalent element in the accused device is immaterial to a DOE analysis. *See* D’s Opp’n at 9-10 (arguing that Dr. Tuckerman testified that “we’re not talking about shapes” Docket No. 427-3 (12/30/2021 Tuckerman Depo.) at 262:1-263:5). First, Dr. Tuckerman subsequently describes “curve” as “something that has some curvature on it,” and clearly relates to the physical structure of the blade, however it is described by Dr. Tuckerman. 12/30/2021 Tuckerman Depo. at 263:3-5. Second, although Asetek emphasizes cases that found equivalency despite differences in shape, it is not immaterial to a DOE analysis. A difference in shape can still vitiate a claim limitation, even if it does not necessarily vitiate claim element. *See Tronzo*, 156 F.3d at 1160 (rejecting the conclusion that a conical-shaped part of an artificial hip socket and a hemispherical shaped part were equivalent because such a conclusion “would write the ‘generally conical outer surface’ limitation out of the claims”). A DOE analysis is not appropriate where the vitiation rule prevails.

CoolIT's accused device, Tamriel, has two structures – the first and second structure – each constituting the upper and lower chambers, connected by a tubing (*i.e.*, a gasket) and screwed together. Ds' Reply at 9 (Tamriel); Estoppel Joint Statement at 17. The parties dispute the significance of the first structure. If it constitutes a separate receptacle, the Tamriel device has two separate receptacles. *See* Ds' Reply at 9 (Tamriel).



If the Tamriel device has two receptacles, Asetek's DOE theory would vitiate the stipulated requirement of Asetek's '362 Patent that both the upper and lower chambers to be divided within the same receptacle of the reservoir. *See Choon's Design Inc. v. Tristar Prod., Inc.*, No. 14-10848, 2020 WL 1362844, at *5 (E.D. Mich. Mar. 23, 2020) ("[T]he clear and natural language of the claim requires a single opening ... [whereas the] accused [product] includes two separate openings ... applying the doctrine of equivalents would entirely vitiate the 'an opening'/'single opening claim element").

a. Collateral and Judicial Estoppel

The affirmative defense of collateral estoppel, also known as issue preclusion, bars the relitigation of issues actually adjudicated in previous litigation between the same parties. *Beauchamp v. Anaheim Union High School Dist.*, 816 F.3d 1216, 1225 (9th Cir. 2016). For the doctrine to apply: (1) the issue must be identical to the one alleged in prior litigation; (2) the issue

1 must have been “actually litigated” in the prior litigation; and (3) the determination of the issue in
 2 the prior litigation must have been “critical and necessary” to the judgment. *Id.* (quoting *Clark v.*
 3 *Bear Stearns & Co., Inc.*, 966 F.2d 1318, 1320 (9th Cir. 1992)).

4 Judicial estoppel is an equitable doctrine that precludes a party from gaining an advantage
 5 by taking one position and then seeking a second advantage by taking an incompatible position.
 6 *Risetto v. Plumbers & Steamfitters Local 343*, 94 F.3d 597, 600 (9th Cir. 1996). The doctrine
 7 requires that (1) a party took a “clearly inconsistent” position with the one now expressed, (2) the
 8 earlier position was accepted by the court to which it was presented, and (3) the party would
 9 derive an unfair advantage or impose an unfair detriment on the opposing party if not estopped.
 10 *New Hampshire v. Maine*, 532 U.S. 742, 750-51 (2001).

11 During the pendency of this action, the ‘354 and ‘355 patents were subject to IPR and were
 12 found unpatentable by the PTAB on August 19, 2021. Order to Stay at 3, n.2. In the IPR
 13 petitions, CoolIT argued that Asetek’s patents was obvious because they relied on prior art
 14 references wherein the reservoir had multiple receptacles within the “single receptacle,” defined
 15 by multiple components in the reservoir. Docket No. 400 at 12.

16 The ‘362, ‘354, and ‘355 patents all describe an invention with a reservoir including an
 17 upper/pump chamber and a lower/thermal exchanger. *See* ‘362 Patent, Claim 17 (“the **reservoir**
 18 including an upper chamber and a lower chamber, the upper chamber and the lower chamber being
 19 separate chambers that are vertically spaced apart and separated by at least a horizontal wall, the
 20 upper chamber and the lower chamber being fluidly coupled by one or more passageways”); ‘354
 21 Patent, Claim 1 (“the reservoir including: an upper chamber and a lower chamber, wherein the
 22 upper chamber and the lower chamber are vertically displaced fluid-containing chambers that are
 23 each surrounded by boundary walls”); ‘355 Patent, Claim 1 (“the reservoir including: a pump
 24 chamber housing an impeller and defined at least in part by an impeller cover and a double-sided
 25 chassis, . . . [and] a thermal exchange chamber disposed between the pump chamber and the heat-
 26 generating component”). At IPR, CoolIT argued that multiple components could constitute a
 27 single receptacle by combining prior arts Duan, Shin and Batchelder. Docket No. 413 at 7. It
 28 argued that prior arts with multiple components formed the claimed reservoir and a “single

receptacle defining a fluid flow path.” Docket No. 402-6 (‘355 IPR Petition) at 25-27, 33 (arguing that prior art Duan discloses a reservoir formed by three components—an accommodation chamber (which discloses a pump chamber), a cap and cooling plate—that integrates to serve as a single receptacle defining a fluid flow path); Docket No. 402-6, Ex. D (‘355 FWD) at 17. Asetek seeks to estop CoolIT from now arguing that the CoolIT products do not infringe Asetek’s patents because a combination of multiple receptacles or components connected or integrated together cannot form the claimed “reservoir.” *See* Docket No. 400 at 7.

Asetek is correct to the extent that an argument “that the ‘reservoir’ cannot have multiple components or subcomponents connected to form a single receptacle” would be inconsistent with CoolIT’s prior argument to IPR. However, Asetek conflates the noninfringement issue by equating “reservoir” and “components” with “receptacles.” The issue, in this case, is not whether multiple components can form a single receptacle or reservoir. Rather, the issue is whether the “upper and lower chambers” within the reservoir that are “separate,” “vertically spaced apart,” and “fluidly coupled by one or more passageways” are both contained in one “single receptacle defining a fluid flow path” under the stipulated construction of a reservoir and not respectively contained in two separable receptacles. ‘362 Patent, Claim 17; Joint Claim Construction Statement at 2-3; Docket No. 237 at 3, Claim Construction Order at 5.

CoolIT’s prior position at IPR is not inconsistent with its current position because the fact that multiple components can form the “reservoir” or a “single receptacle” is not determinative of the question of whether multiple chambers can be considered each a separate receptacle within the reservoir. Thus, CoolIT’s previous construction of “reservoir” is not inconsistent with the current agreed construction of “reservoir” and “chamber.” Nor is it inconsistent with CoolIT’s current construction of “receptacle.” Furthermore, CoolIT points out that the claim language of the ‘355 patent makes clear that other components can be part of the “reservoir,” including a pump chamber housing an impeller, an impeller cover, and a double-sided chassis. Docket No. 420 at 17. That other components may form part of that single receptacle is immaterial to CoolIT’s argument that multiple receptacles cannot form the claimed reservoir.

b. The “Single Receptacle” Requirement

The parties dispute whether (1) the first structure defining the upper (pump) chamber is a second receptacle, and (2) the upper and lower chambers of the Tamriel are “separable.” If the first structure (upper chamber) constitutes a receptacle by itself, or the upper and lower chambers are separable as separate receptacles rather than constituting a single unitary unit, the device will not satisfy the stipulated “single receptacle” reservoir construction.

According to Asetek’s expert Dr. Tuckerman, the first structure of Tamriel (*i.e.*, the top chamber) is a “subcomponent . . . designed to fit within the reservoir housing via mating and interconnecting features” to form a “single receptacle.” 11/3/2021 Tuckerman Expert Infringement Rep. ¶¶ 147, 149-150. CoolIT, on the other hand, argues that both structures are each a receptacle separable by removing the screws – *i.e.*, “removably coupled” together. Ds’ Opp’n at 9-10. Hence, there is not a simple “receptacle.” CoolIT finds similarities to the Ryu reference in the CMI case. In *CMI*, CMI had argued that the heat exchanging interfaces in the accused products were screwed to the device and were not intended to be removed, and to do so would damage the products or otherwise render them nonfunctional; therefore, it did not infringe the ‘362 Patent requiring the heat exchanging interface to be “removably coupled” to the reservoir. *CMI USA Inc.*, 852 F.3d at 1359-60. However, the jury found that the device was “removably attached” or “removably coupled,” and the Federal Circuit affirmed, even though removal would cause coolant to leak. *Id.* The Federal Circuit reasoned that the patent did not require the functionality of each component upon detachment, and the device would function again if the components were reattached. *Id.* CoolIT argues that, like the Ryu reference, the two separable receptacles expose fluid to the outside of the closed-loop and require gasket-tubing to seal the connections. Ds’ MSJ at 22. Asetek disputes CoolIT’s comparison to Ryu.

The parties’ arguments about whether there are one or two receptacles focus mainly on mechanical separability – *i.e.*, through screws and a gasket. CoolIT argues the fact that the two chambers are thus attached and separate shows there are two receptacles. However, the Court does not find a mechanical distinction dispositive and instead looks to the function of the structures. A receptacle is a structure that receives and contains fluid. Docket No. 386-4, Ex. 3

(12/8/2021 Abraham Non-Infringement Rep.) ¶ 86 (“[A] receptacle . . . is simply ‘one that receives and contains something’ like a container”) (quoting Merriam-Webster’s Collegiate Dictionary)).

Here, the two structures are not only spatially separated by the tubing (*i.e.*, gasket)¹⁰, but they are also functionally independent. CoolIT’s expert, Dr. Abraham, includes a demonstration in his expert report that Tamriel’s two structures can function as two receptacles independently of and away from each other, just like the prior art Ryu. 12/8/2021 Abraham Non-Infringement Rep. ¶ 245 (“I have had a demo made to show that, when the two chambers of CoolIT’s new design is separated and connected by a tube, the device functions just the same[.]”). CoolIT also points out that both Ryu and Tamriel have a separation of the pump chamber that leads to a possible leakage, which is prevented through gasket-tubing. 12/8/2021 Abraham Non-Infringement Rep. ¶ 259 (“[The gasket tubing connections] are the connections that Asetek has repeatedly touted that its purported invention with a single-receptacle ‘reservoir’ would eliminate and would thus increase reliability over prior art.”). The Court agrees with CoolIT that the two structures function independently. Asetek’s contrary arguments are unconvincing:

First, Asetek points out that Tamriel’s top chamber subcomponent is permanently affixed to the reservoir housing and is not separable without significant fluid loss; therefore, it is not a functionally independent device like Ryu’s pump driver that is intended to be replaceable by a user. Opp’n at 16. Asetek argues that the device was not intended to be taken apart, and doing so would destroy the product because to take out the screws would require breaking the circuit board. *Id.* However, Asetek’s argument fails because the issue here is not whether the device itself would be destroyed if physically taken apart but whether the first and second structures can each function as a receptacle, which Dr. Stein has shown through his simulation.¹¹

¹⁰ CoolIT points out that both Ryu and Tamriel have a separation of the pump chamber that leads to a possible leakage, which is prevented through gasket-tubing. 12/8/2021 Abraham Non-Infringement Rep. ¶ 259 (“[The gasket tubing connections] are the connections that Asetek has repeatedly touted that its purported invention with a single-receptacle ‘reservoir’ would eliminate and would thus increase reliability over prior art.”).

¹¹ CoolIT also points out that this issue was unsuccessfully litigated by Asetek in *CFI*. Ds’ Reply at 10. However, *CFI* is not entirely on point because *CFI* did not deal with whether a structure

Next, Asetek points out that the top chamber subcomponent fulfills the same function as the impeller cover 46A in Asetek's preferred embodiment but is not described as a "receptacle" in the '196 patent. Ds' Opp'n at 17. However, it is the '362 Patent at issue in this case, not the '196 patent. Furthermore, impeller cover 46A is only a preferred embodiment in the '196 patent and therefore not dispositive.

For the foregoing reasons, the Court finds that Tamriel's two structures function as two receptacles.¹²

c. Nesting Doll

Asetek also argues that, even if the top chamber subcomponent of the Tamriel is called a receptacle, it is still only a smaller receptacle contained within the larger receptacle that forms the reservoir housing, like the "nesting doll analogy." *Id.* at 18. Asetek points out that in *CMI*, CMI argued that the presence of a sub-chamber (which they argued was a receptacle) within the reservoir housing meant that the reservoir was not a single receptacle. *Id.* at 17-18. Judge Tigar noted:

it could be that even if the copper sub-chamber is a receptacle, that would not change the fact that the reservoir is a single receptacle divided into an upper chamber and lower chamber – the lower chamber would merely include or consist entirely of a smaller receptacle or sub-chamber. For example, nesting dolls contain many receptacles. But the smaller dolls – or receptacles – do not affect whether the biggest doll is a 'single receptacle'.

Id. at 18 (quoting the CMI case, Docket No. 426 at 6).

The Court finds the nesting doll analogy unconvincing under the facts of this case.

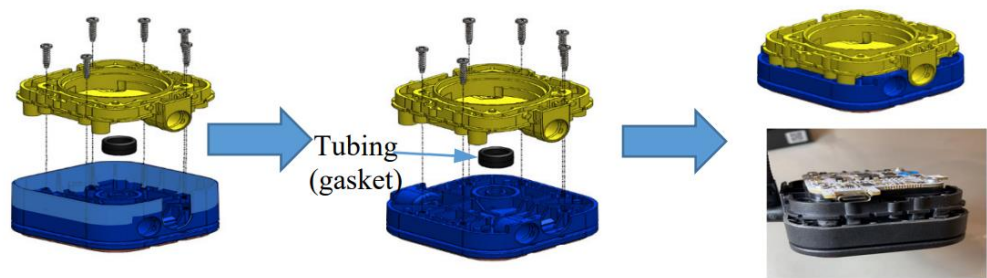
According to Dr. Abraham, the "encasement" or "outer wall" has no function and is merely cosmetic without touching liquid; the device will function the same even if it is removed.

12/8/2021 Abraham Non-Infringement Rep. ¶¶ 235-39. Asetek argues that the surrounding wall

constituted a receptacle, but whether the accused product met '362 Patent's requirement that the "heat-exchanging interface" must be "removably attached" or "removably coupled" to the "reservoir." '362 Patent, at 20:3–6; *CMI USA Inc.*, 852 F.3d at 1356.

¹² Asetek also argues that CoolIT's own documents and pictures of Tamriel refer to the top chamber subcomponent as "chamber" and not a "receptacle." Ds' Opp'n at 14 (citing Ex. E). However, the relevant document does not specifically label the top chamber subcomponent as a "receptacle" but merely has the heading "chamber, pump, Tamriel." *See* Ex. E.

functions “to provide physical structure and stability and to contain any leaks” because “if the device is tilted and the gasket doesn’t perform well, the liquid will leak out.” Docket No. 488 (Hearing Transcript) at 45:10-19, 24-25. However, Asetek fails to demonstrate the outer walls are functionally indispensable to the operation of the two chambers; at best, the evidence establishes they function to contain incidental, not essential, leaks. Furthermore, the first structure (*i.e.*, the receptacle) is not completely enclosed in the second structure, as shown below:



Ds’ Reply at 12 (Tamriel showing the first structure (yellow) and the surrounding walls (light blue) of the second structure (blue)). As such, there is no “doll within a doll.”

Because Tamriel constitutes two separable receptacles, the Court **GRANTS** CoolIT’s motion for summary judgment of noninfringement on the reservoir limitation.

3. Validity of CoolIT’s Patents

a. The Antarctica Device as Prior Art

The Antarctica sample is a product sold by Asetek in the U.S. prior to CoolIT’s priority date of August 9, 2007, and therefore, presented as prior art by Asetek. *See* Docket No. 427 at 24. CoolIT argues that the Antarctica sample fails as prior art because Asetek offers no evidence qualifying it as prior art. D’s MSJ at 24. CoolIT points out that the parties never stipulated that the physical sample Dr. Tuckerman relied upon in his expert report was on sale prior to August 9, 2007, and that Asetek did not provide any evidence regarding when the sample was manufactured, the sample version, and whether that version was sold prior to 2007 or had even been approved for sale. *Id.* at 25.

Asetek sufficiently identifies the Antarctica device as prior art by providing a spreadsheet

of sales data showing that “CPU cooler Antarctica” devices were sold between 2004 and 2006. *Id.* at 5-6. CoolIT argues that this spreadsheet is insufficient because there is no evidence linking the Antarctica physical sample to a version of the Antarctica device reported as sold in that data. D’s MSJ at 6; D’s Reply at 15. However, Asetek provides a declaration with the following statement by Mr. Eriksen: “I designed and developed the Antarctica ‘Water Chill’ Liquid Cooling Kit (“Antarctica”) in 2003-2004. . . . The Antarctica had only one version/generation of the cold plate, which had microchannels.” Docket No. 427-11 at 1-2. Mr. Eriksen further states that the version he gave Asetek’s counsel was the version sold in the U.S. in 2004-2006. *Id.* at 2. Mr. Eriksen’s representation that the Antarctica device had only one version during 2004-2005 and that the sample he provided to Asetek’s counsel is representative of that version, as well as the sales data between 2004-2006 is sufficient to show that the Antarctica device physical sample provided to Dr. Tuckerman is representative. CoolIT have not submitted any case law that the evidence presented by Asetek is insufficient. As such, Asetek has presented evidence that the Antarctica kits were sold and offered for sale in the U.S. prior to CoolIT’s asserted priority date.

CoolIT also points out that Dr. Tuckerman admitted that he could not be sure that the sample was representative of the actual device (and the location of the port did not seem to be the same as the description in the user manual) and that he “would have no way of knowing” if the actual Antarctica product sold had channels one millimeter or less. *Id.* (citing Ex. 24 (12/20/21 Tuckerman Dep.) at 134:5-18, 141:16-142:8). This argument fails because the fact that Dr. Tuckerman did not know whether the Antarctica sample was the actual device on sale prior to August 9, 2007 is immaterial, as the foundation for the device may be established at trial.

For the foregoing reasons, Asetek provides sufficient evidence qualifying the Antarctica sample as prior art.

b. Microchannels

The ‘330, ‘284, and ‘266 Patents each recite or depend on an independent claim that recites a “plurality of [fins/walls]” defining a “corresponding plurality of microchannels.” See ‘330 Patent, Claims 1, 12, 14; ‘284 Patent, Claims 1, 15; ‘266 Patent, Claim 13. The parties stipulated that “microchannels” are defined as “channels with widths up to 1 millimeter.” Joint Claim

Construction Statement at 3. Asetek seeks to invalidate the CoolIT Patents because the Antarctica sample has microchannels that are less than 1.0mm and anticipates or renders obvious the CoolIT Patents. Asetek’s expert, Dr. Tuckerman, opines that the patents are invalid because Asetek’s Antarctica device has channels spaced about 0.9–1.0mm. Docket No. 387-10, Ex. 9 (11/3/2021 Tuckerman Invalidity Rep.) at ¶ 57. CoolIT’s expert, Dr. Pokharna, measures the Antarctica’s channel width to be between 1.18 mm to 1.25 mm, exceeding the parties’ stipulated definition of “microchannels.” Docket No. 387-15, Ex. 11 (12/8/21 Pokharna Rebuttal Invalidity Rep.) ¶ 74. CoolIT seeks summary judgment of validity because Asetek lacks evidence that the Antarctica sample has the claimed microchannels that are less than 1.0 mm. Ds’ MSJ at 6, 23. According to CoolIT, Dr. Tuckerman’s expert opinion fails to show his methodology and is conclusory with no factual foundation because he failed to record the claimed measurements of less than 1.0mm. *Id.* at 23-24 (citing *Schumer v. Lab. Comp. Sys., Inc.*, 308 F.3d 1304, 1316 (Fed. Cir. 2002) (“testimony is insufficient if it is merely conclusory”); *Novartis*, 271 F.3d at 1050-51 (noting that an expert must set forth an “explicit factual foundation” for his opinions); *TechSearch, L.L.C. v. Intel Corp.*, 286 F.3d 1360, 1371 (Fed. Cir. 2002) (“A party may not overcome a grant of summary judgment by merely offering conclusory statements”)).

Dr. Tuckerman admits that he never recorded his measurements because “[he] felt that the readings were close enough that [he] didn’t need to -- that combined with . . . Eriksen’s testimony and my own measurements.” Docket No. 387-28, Ex. 24 (12/20/2021 Tuckerman Depo.) at 138:17-22. Andre Eriksen is Asetek’s CEO and inventor of the device and testified that his “best guess” as to the widths of the channels was between 0.6 and 0.8 mm.¹³ Docket No. 387-14, Ex. 10 (8/24/2021 Eriksen Depo.) at 117:17-25.

As discussed separately regarding CoolIT’s motion to exclude, Dr. Tuckerman may not adopt the opinion of another on the exact subject of his report under the mere guise of “corroborating” evidence. Nevertheless, Dr. Tuckerman’s opinion is not conclusory because it is

¹³ Asetek also points to Exhibit 275 to argue that the manufacturing of the blades intended them to be “a nominal 1-millimeter” cut. Ds’ Opp’n at 23. However, the Court excludes this exhibit for reasons discussed separately.

1 based on his own measurements, and he discloses the methods for his measurements. Although
 2 Dr. Tuckerman fails to disclose his methodology for his measurement in his Invalidity Report, he
 3 clarifies that the Antarctica sample was measured using calipers at the base of the microchannels
 4 (where the most heat transfer occurs and is narrowest, according to him) during his depositions.
 5 12/20/2021 Tuckerman Depo. at 137:22-148:4. As such, there are two competing measurements
 6 provided by experts on each side, with their methodology fully disclosed. Although the jury may
 7 find Dr. Tuckerman's opinion less credible due to his failure to record his measurements, his
 8 testimony and expert report are sufficient to survive summary judgment.

9 Accordingly, the Court **DENIES** CoolIT's motion for summary judgment regarding the
 10 validity of the CoolIT Patents.

11 **IV. CONCLUSION**


12 For the foregoing reasons, the Court **GRANTS IN PART** Asetek's Motion for summary
 13 judgment with regards to the validity of the '362 Patent and **DENIES IN PART** the Motion with
 14 regards to noninfringement of CoolIT's '266, '284, and '567 Patents. The Court **GRANTS IN**
 15 **PART** CoolIT's Motion for summary judgment with regards to noninfringement of the reservoir
 16 and curved blade limitations of Asetek's '362 Patent and **DENIES IN PART** the Motion for the
 17 validity of CoolIT's '266, '284, and '567 Patents.

18 Out of an abundance of caution, the Court provisionally files the entirety of this order
 19 under seal. The Court orders the parties to meet and confer to determine which parts of this order
 20 should be filed under seal. The parties shall file their joint sealing request with respect to this
 21 order within one week.

22 This order disposes of Docket Nos. 387 and 394.

23 **IT IS SO ORDERED.**

24
 25 Dated: September 11, 2022

26
 27 
 28 EDWARD M. CHEN
 United States District Judge